

We claim:

1. A process for separating a liquid mixture of at least two
5 components A and B which form an azeotrope with one another,
optionally together with further components, which comprises
 - i) distilling the mixture to be separated in the presence
of an auxiliary H which with each of the two components
10 A and B forms a binary azeotrope AH or BH which has a
boiling point lower than that of H, and
 - ii) isolating an A,H-containing fraction which is depleted
in B compared to the mixture to be separated and a
B,H-containing fraction which is depleted in A compared
15 to the mixture to be separated.
2. A process as claimed in claim 1, wherein the auxiliary H is
additionally able to form a ternary azeotrope with the
20 components A and B.
3. A process as claimed in claim 1, wherein the mixture to be
separated is introduced continuously into a column for the
distillation.
- 25 4. A process as claimed in claim 3, wherein at least part of the
auxiliary is introduced into the column together with the
mixture to be separated.
5. A process as claimed in claim 3, wherein at least part of the
30 auxiliary H is introduced at the top and/or in the upper
region of the column.
6. A process as claimed in claim 5, wherein the auxiliary H is
obtained as bottom product and is recirculated at least
35 partly to the top and/or into the upper region of the column.
7. A process as claimed in claim 3, wherein the A,H-containing
fraction is taken off at a point above the feed point for the
mixture to be separated and the B,H-containing fraction is
40 taken off at a point below the feed point for the mixture to
be separated.
8. A process as claimed in claim 5, wherein the mass flow of the
auxiliary H introduced is from 0.5 to 15 times the mass flow
45 of the mixture to be separated, based on the part different
from H.

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9. A process as claimed in claim 1, wherein the binary azeotrope AH and/or BH is a heteroazeotrope.
10. A process as claimed in claim 9, wherein the liquid or
5 liquefied A,H-containing and/or B,H-containing fraction is subjected to a phase separation to give an A-rich or B-rich phase and an H-rich phase and the H-rich phase is returned to the column.
- 10 11. A process as claimed in claim 1, wherein the mixture to be separated is a mixture comprising a first component selected from among chlorinated hydrocarbons and monocyclic C₆-C₁₀-aromatics and a second component selected from among C₃-C₈-alkanols and the auxiliary used is water.
- 15 12. A process as claimed in claim 11, wherein the chlorinated hydrocarbon is perchloroethylene and the alkanol is n-butanol and the mixture optionally further comprises butyl chloride.
- 20 13. A process as claimed in claim 12, wherein the liquefied n-butanol/water fraction is subjected to a phase separation to give an n-butanol-rich phase and a water-rich phase and the n-butanol-rich phase is separated by distillation into a
25 fraction enriched in n-butanol and a fraction depleted in n-butanol.
- 30 14. A process as claimed in claim 12, wherein a fraction which comprises butyl chloride and water and is largely free of perchloroethylene and n-butanol is additionally obtained as lowest-boiling fraction.
- 35 15. A process as claimed in claim 11, wherein the auxiliary H further comprises a base.

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